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ABSTRACT

This study investigates the effects of age and prior experience with age-mates on attachment behavior and exploratory play with another child. Twenty home-reared children, half between 18 and 24 months and half between 24 and 30 months, and 20 day care children, also equally divided into the two age groups, were observed in the Ainsworth strange situation. The stranger was a 5-year-old female. The arrangement of the playroom was modified to create a forced-choice situation between the mother and a playmate and/or toys. Repeated measures of exploration and attachment behaviors were analyzed by computing multivariate analyses of variance and covariance. Age of the children affected exploratory and attachment behavior. Older children ventured a greater maximum distance from the mother and exhibited less crying associated with separation from the mother. Day care children ventured a greater maximum distance from the mother, spent more time away from the mother, more time out of mother's visual field and more time in exploratory play. No differences in intensity of attachment behavior at reunion attributable to rearing situation were found. Home-reared and day care children did not differ in the amount of time spent in social play. Significant rearing by sex interactions led to consideration of the differential effects of the rearing situations for boys and girls. (Author/RH)

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The Effect of a Playmate on Day-care and Home-reared Toddlers in a Strange Situation

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Common everyday observation shows that children eventually spend the major portion of their time with other children away from the mother. Cultural and situational factors have determined the time for the emergence of this developmental pattern by specifying the age for daily separation from the mother and for encounters with other children. Group day care differs from home rearing as a situation of daily separation from the mother with many opportunities for contact with other children through participation in a play group. It has not received unqualified acceptance for infants and toddlers because it has been thought that daily separation from the mother may be cause for some deviation in the "normal" mother-child attachment relationship. This has resulted in evaluations of the day care experience which have focused primarily on the effect on the child's attachment relationship with the mother (Blehar, 1974; Brookhart & Hock, 1976; Caldwell, Wright, Honig & Tannenbaum, 1970; Doyle, 1975; Maccoby & Feldman, 1972; Ricciuti, 1974). It appears that by focusing so narrowly on the mother-child relationship and separation experiences, we may be ignoring a positive aspect of the day care experience, the importance of peer relations for infants and toddlers.

To explore this, I decided to examine whether another child could supplant the mother as a support for exploration and play as a function of prior social exposure to children and if the presence of the other child would elicit social play that could disrupt the proximity maintaining behavior of the attachment system. Toddlers were chosen for study because infant attachment patterns appear to decline around the

second birthday (Cox & Campbell, 1968; Kotelchuck, Zalazo, Kagen, & Spelke, 1975; Rheingold & Eckerman, 1970). Paralleling the attenuation of infant attachment behavior, there appears to be an increase in social interaction with peers (Anderson, 1972; Eckerman, Whatley, & Kutz, 1975). In order to investigate this developmental shift in the balance of attachment behavior and exploratory play with children, it was essential to adopt an approach in which both attachment behavior and social play with another child could be studied at the same time. A procedure that gives the child a choice between the mother and a child playmate with access to both would permit this. A modification of the strange situation developed by Ainsworth and Wittig (1969) that incorporates such a forced-choice situation and replaces the adult female stranger with a child stranger, not only made this possible but allowed for assessment of attachment behavior by established method and criteria.

Method

Subjects

The subjects were middle class, 20 day-care children, half between the ages of 18 and 24 months and half between 24 and 30 months, and 20 home-reared children also equally divided into the two age groups. Equal numbers of boys and girls were selected for each of the age levels within rearing groups. All of the day-care children were attending a day care center for at least 40 hours a week immediately preceding participation in the study. The mean length of time in attendance was 10 months with a range of 4 to 24 months. The 20 home-reared children were principally cared for in their own homes by their mothers. The

two rearing groups differed significantly on the mean number of hours of group experience out of the home in the absence of the mother ($\bar{X}$ = 158 hours for the home-reared children in contrast to $\bar{X}$ = 2,182 hours for the day-care children).

In order to demonstrate the equivalence of the day-care and home-reared samples for other than the rearing situation, measures of family composition and home experience were obtained via a questionnaire completed by the mother. The family composition items included mother's age, father's age, mother's years of education, father's years of education and number of siblings. The home experience items (Schwarz and Wynn, 1971) were those assumed to be closest to the situation encountered in a day care center which involves contact with several peer-age children and adults other than family members in the absence of the mother. The items were size of the child's home play group, how often the child played at a friend's house, number of times the family goes out leaving the child with a sitter, and the number of different sitters used by the family. Both family composition and home experience were investigated for rearing situation by multivariate analysis of variance (MANOVA, Clyde, 1969). Neither family composition nor home experience discriminated between the day-care and home-reared groups. Family composition and home experience variables were also computed for sex of the child. Neither family composition nor home experience discriminated differences between boys and girls.

Procedures

Subjects were observed in a laboratory play room while the mother

sat in an adjacent room completing the questionnaire. She was seated within the visual field of her child looking through the play room doorway and contact was not prevented. In order to create the forced-choice situation, age appropriate but immovable toys were located at the end of the play room farthest from the doorway to the mother's room. The play session followed the scenario of the Ainsworth strange situation.

Six 5-year-old female children served as the child strangers. They were instructed to remain in the play room in the vicinity of the toys and attempt to engage the child in play. The child strangers were trained during pilot sessions but there were observed differences in their play with a younger unfamiliar child. Because of this, a different playmate was chosen for each child within each of the eight groups.

The behavior of the three participants was videotaped through a one-way vision mirror in the play room. A microphone recorded speech and vocalization. The videotaped records were coded to extract quantifiable measures of exploratory play and attachment behavior. Exploration was measured by greatest maximum distance from the mother, time away from the mother, time out of the visual field of the mother, exploratory toy play, and social exploratory play. Attachment behavior was measured by visual contact seeking, crying, search behavior, proximity seeking behavior, and proximity avoiding behavior. Distance, frequency-intervals and intensity measures were utilized. Intercoder reliability averaged .94 across measures with a range of .99 to .75. The effects of age, sex, and rearing condition were tested by computing repeated measure multivariate analyses of variance or covariance (MANOVAs) for each of

the ten dependent measures.

Results

The anticipated significant effects for episodes are consistent with the results reported by other investigators (Blehar, 1974; Feldman & Ingham, 1975; Maccoby & Feldman, 1972) who have employed the strange situation with children who are about two years of age.

No significant differences were found between day-care and home-reared children for any of the five measures of attachment behavior.

Age of the children affected exploratory and attachment behaviors. The older children ventured a greater maximum distance from the mother, $F(3,30)=3.089$, $p < .042$, and exhibited less crying associated with separation, $F(7,26)=2.505$, $p < .041$. The differences are in the direction expected, though finding significance for only one measure out of five for each of the two categories of behavior is less than substantial.

There were three significant differences between rearing groups on measures of exploratory behavior. The day-care children ventured a greater maximum distance from the mother, $F(3,30)=5.589$, $p < .004$, spent more time away from the mother, $F(3,30)=4.085$, $p < .015$, and more time out of the mother's visual field, $F(3,30)=3.562$, $p < .026$. Exploratory toy play was marginally significant, $F(7,26)=2.329$, $p < .055$. The day-care group, however, did not participate in social play with the unfamiliar child more than the home-reared group.

Significant rearing by sex of the child interactions were found for the four measures based on the child's proximity to the mother; greatest maximum distance from the mother; $F(3,30)=4.562$, $p < .010$, time

away from the mother, $F(3,30)=3.438$, $p < .029$, time out of the visual field of the mother, $F(3,30)=4.112$, $p < .015$, and visual contact seeking, $F(3,30)=3.605$, $p < .025$. These several rearing by sex effects appear to be related to the introduction of the unfamiliar playmate. The day-care girls were the most hesitant during the familiarization period, episode 3, withdrawing from the playmate to the area in the play room where the mother was visable. This wariness was very short lasting. No further decreases occurred and, in fact, day-care girls spent more time in social play and exploration than the other three groups during the final most stressful episodes of the strange situation. The other three groups behaved in just the opposite fashion; attracted by the playmate's presence initially followed by a sharp decline in exploration. Actually each of the four rearing by sex groups differed in their strange situation behavior in as much as the quadratic trend was significant for those measures.

Search behavior revealed significant differences for sex of the child, $F(3,30)=3.061$, $p < .043$. The most active searching occurred for girls after the mother's first departure and this did not change when the girls were left alone. The boys, however, became most active in searching for the mother when they were alone. The scores for boys and girls were quite similar in episode 7 with the arrival of the playmate.

Discussion

The several rearing by sex effects were not expected and warrent consideration. They suggest that there are more basic differences

between day-care and home-reared boys and girls than the differences in wariness which was not a good predictor of social interaction with another child. Kagen et al. (1975) have suggested that wariness is indicative of the child's inability to resolve questions about whether the actions of the unfamiliar child will be friendly or not. Based on the results of their longitudinal study of day-care and home-reared children, the authors concluded that the exhibition of wariness in the presence of an unfamiliar child was a function of both cognitive maturity and experience. The cognitive precocity of females reported by Kagen et al. (1975), suggests that the day-care girls in the present study were likely to form questions about the other child. Their experience in daily interactions with other young children may have given them cause to hesitate before responding to another child. They may have been considering the fact that not all children make good playmates and waited for some signal of friendliness. Once this occurred, the day-care girls found the company of the other child highly attractive and were the most socially interactive group.

The home-reared girls behaved in an opposite fashion, perhaps based on their prior experience. It seems reasonable to assume that their previous experience with other children consisted of playmates selected by the mother on the basis of the children's ability to play in a friendly fashion. These encounters probably occurred in the presence of one or the other child's mother. If this were the case, the home-reared girls in the present study might have been able to quickly resolve the question raised concerning the unfamiliar child in the affirmative. This would account for the most marked increases in social play and exploration for

the home-reared girls with the appearance of the other child, but over all they spent the least amount of time in exploration and play away from the mother.

The boys did not display any wariness toward the unfamiliar child, but the play behaviors were different for day-care and home-reared boys in the presence of the playmate. The home-reared boys while they remained in the play room and away from the mother, were involved in solitary play with toys which suggests more a lack of social skill than the inhibition of exploration associated with wariness. The day-care boys appeared to have a repertoire of social skills and engaged in play with the unfamiliar child.

Kagen et al. (1975) suggest that because boys are more interactive than girls in the day-care situation, the daily contact with peers has a more substantial influence on reducing uncertainty for boys than for the less active girls. The home setting does not produce this difference. It may be that less vigorous play is permitted in the home than is likely to occur in a day-care center. When gross motor equipment, such as a slide, is not available, boys engage in more rough-and-tumble play than girls (Blurton-Jones, 1972). It is not as usual to find this type of equipment in the home as it is to find it in day-care centers. Boys may therefore receive more negative reinforcement for their social interactions in the home than the less active girls. This may result in home-reared boys having fewer social skills for interacting with the playmate, than day-care boys or home-reared girls.

One conclusion that may be drawn is that the day-care experience

tends to reduce differences in boys and girls. For example, girls tend to engage in as much rough-and-tumble play near a slide as boys (Blurton-Jones, 1972). In more global terms, the day-care experience may be considered one that facilitates the development of independence from the mother. Home-rearing, on the other hand, may encourage sex stereotyping which would tend to produce more dependency in girls than in boys. These findings are also supported by Cornelius and Denny (1975), who found no differences between day-care boys and girls, although home-reared girls sought proximity to the mother more than home-reared boys.

Although such rearing conditions as day care and home rearing tend to differently affect the social behaviors of boys and girls, the differences between rearing groups also found in the present study suggest that early experience with other children in group care facilitates the development of peer relations that are supportive of exploration and play in the mother's absence. The differences between rearing groups in exploration do not conform to the results reported by other investigators (Blehar, 1974, Brookhart & Hock, 1976, Maccoby & Feldman, 1972). These conflicting results may be related to the behaviors directed toward the stranger. Other investigators found that day-care children were more avoidant of the adult stranger than home-reared children. One conclusion that may be drawn is that the adult stranger may have inhibited exploration. In the present study, however, the presence of a child stranger appeared to have the opposite effect. It is reasonable to assume that home-reared children spend more time with adults or alone than with other children in comparison to day-care children. The rearing situations

appear to provide different socializations experiences for children which is reflected in their ability to feel comfortable in the presence of an unfamiliar child or an unfamiliar adult.

The day-care experience is a complex social event. Other studies are needed in order to gain a more thorough understanding of its effect on the young child. The present study has indicated that the social responsiveness of the young child toward another child may be enhanced by daily contacts with other children, and that the development of these social skills may facilitate the growth of independence in both boys and girls. Contrary to the Bowlby-Ainsworth position which assumes that daily separation from the mother is detrimental to the mother-child attachment relationship, this study also suggests that the day-care experience is not associated with any deviation in the "normal" mother-child attachment relationship.

References:

Ainsworth, M.D.S., and Wittig, B.A. Attachment and exploratory behavior of one-year-olds in a strange situation. In B.M. Foss (Ed.), Determinants of infant behavior IV. London: Methuen, 1969, pp. 111-136.

Anderson, J.W. Attachment behavior out of doors. In N. Blurton-Jones (Ed.) Ethological studies of child behavior. Cambridge: Cambridge University Press, 1972, pp. 199-215.

Blehar, M.P. Anxious attachment and defensive reactions associated with day care. Child Development, 1974, 45, 683-692.

Blurton-Jones, N. Categories of child-child interaction. In N. Blurton-Jones (Ed.), Ethological Studies of Child Behavior. Cambridge: Cambridge University Press, 1972, pp. 97-127.

Brookhart, J. and Hock, E. The effects of experimental context and experimental background on infants' behavior toward their mothers and a stranger. Child Development, 1976, 41, 333-340.

Caldwell, B.M., Wright, C.M., Honig, A.S., Tannenbaum, J. Infant care and attachment. American Journal of Orthopsychiatry, 1970, 40, 397-412.

Clyde, D.J. Multivariate analysis of variance on large computers. Clyde Computing Service, 1969.

Cornelius, S. W. and Denny, N.W. Dependency in day-care and home-care children. Developmental Psychology, 1975, 2, 575-582.

Cox, F.N. and Campbell, D. Young children in a new situation with and without their mothers. Child Development, 1968, 39, 123-131.

Doyle, A. Development in day care. Developmental Psychology. 1975, 2, 655-656.

Eckerman, C., Whatley, J., and Kutz, S. Growth of s[illegible] play with peers during the second year of life. Developmen[illegible]sychology, 1975.

Feldman, S.S. and Ingnam, M.E. Attachment behavior: a validation study in two groups. Child Development, 1975, 46, 319-330.

Kagan J., Kearsley, R.B., and Zalazo, P.R. The emergence of initial apprehension to unfamiliar peers. In M. Lewis and L.A. Rosenblum (Eds.), Friendship and peer relations. New York: Wiley, 1975, pp. 187-206.

Kotelchuck, M., Zalazo, P.R., Kagan, J., and Spelke, E. Infant reaction to parental separations when left with familiar and unfamiliar adults. Journal of Genetic Psychology, 1975, 126, 252-262.

Maccoby, E.E. and Feldman, S.S. Mother-attachment and stranger reactions in the third year of life. Monographs of the Society for Research in Child Development, 1972, 37, No. 1.

Rheingold, H.L. and Eckerman, C.O. The infant separates himself from his mother. Science, 1970, 168, 78-83.

Ricciuti, H.N. Fear and the development of social attachments in the first year of life. In M. Lewis and L.A. Rosenblum (Eds.), The origins of fear. New York: Wiley, 1974, pp. 73-106.

Schwarz, J.C. and Wynn, R. Prediction of initial emotional response and early adjustment to preschool. Paper presented at biennial meeting of the Society for Research in Child Development, Minneapolis, Minnesota, April, 1971.